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Federal Communications Commission
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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

1998 Biennial Regulatory Review --
Conducted Emissions Limits Below 30 MHz
For Equipment Regulated under Parts 15
And 18 of the Commission's Rules

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ET Docket No. 98-80

**COMMENTS OF THE ASSOCIATION OF
HOME APPLIANCE MANUFACTURERS**

The Association of Home Appliance Manufacturers ("AHAM") submits these comments in response to the Commission's Notice of Proposed Rulemaking on conducted emissions of radio frequency ("RF") energy below 30 MHz.^{1/} AHAM is a non-profit trade association representing the interests of the major and portable home appliance industry.^{2/} The home appliance industry plays a vital role in the United States economy. Sales in the major appliance division alone represented over \$15 billion in 1998. AHAM represents 163 companies, including many international corporations producing and selling products around the world. Ten of these companies are directly involved in the marketing of microwave ovens in the United States.^{3/}

^{1/} In the Matter of 1998 Biennial Review -- Conducted Emissions Limits Below 30 MHz for Equipment Regulated under Parts 15 and 18 of the Commission's Rules, ET Docket No. 98-80, Notice of Proposed Rulemaking, FCC 99-296 (released October 18, 1999) ("NPRM").

^{2/} Major appliances manufactured by AHAM members include refrigerators/freezers, clothes washers and dryers, kitchen ranges, and ovens (gas and electric), microwave ovens, room air conditioners, and dishwashers.

^{3/} AHAM members in the microwave oven business include Maytag, Whirlpool, Samsung Electronics, Panasonic, Amana, Sharp, Frigidaire, Sanyo, LG Electronics, and General Electric.

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LISTA B C D E

AHAM does not oppose most elements of the Commission's plan to harmonize its standards on conducted emission limits with the standards developed by the International Special Committee on Radio Interference ("CISPR"). As a trade association representing the preponderance of companies responsible for marketing appliances in the United States, however, AHAM is concerned that the FCC's proposed compliance deadlines for lower conducted emission limits for residential microwave ovens could impose undue economic burdens on microwave oven makers and their customers. In order to reduce the cost of compliance while fully preserving the benefits of harmonization with international standards, AHAM believes that the NPRM proposal should be modified to establish a single, uniform three-year deadline for both new and existing models of residential microwave ovens. AHAM's proposed modification would reduce the economic burdens associated with compliance with the FCC's lower conduct emission limits by enabling AHAM members to spread the resulting costs over several years. For the reasons explained below, the FCC's proposed one-year deadline for new models of residential microwave ovens would place an unreasonable burden on the microwave oven industry and should be rejected.

I. ANY RULE REQUIRING NEW MODELS OF MICROWAVE OVENS TO COMPLY WITH STANDARDS WITHIN ONE YEAR IN THE UNITED STATES WOULD PLACE AN UNDUE ECONOMIC BURDEN ON MANUFACTURERS

If manufacturers are required to modify new models of microwave ovens to meet the CISPR standard within one year, they will be forced to install RF filters at a cost of approximately three to twenty dollars for each unit, depending on production volumes for each model.^{4/} This cost may not seem high on its face, but it represents a substantial amount in light

^{4/} This estimate is based on proprietary information from AHAM members and reflects a variety of fixed costs, such as engineering, development and testing expenses of approximately \$150,000 per model, line testing equipment costs of \$50,000 to \$100,000 per model, and other fees that are likely to add another \$25,000 per model, as well as per-unit filter costs.

of the slim margins in the residential microwave oven market, where unit volume is high, competition is robust and consumer resistance to price increases is strong.^{5/} According to the latest surveys, more than 93 million microwave ovens are currently in use in the United States, and approximately 95 percent of all U.S. households have at least one microwave oven.^{6/} From 1980 to 1994, the average retail price of a microwave oven fell from \$450 to \$239,^{7/} and many models are now available at retail for less than \$100.

As a result, the cost of incorporating RF filters capable of reducing conducted emissions of RF radiation to meet the CISPR standards would represent a substantial proportion of the manufacturer's cost for each microwave oven. As explained in the following sections, the cost associated with the FCC's one-year compliance deadline for new models is out of proportion to any advantage that would be achieved, and a uniform three-year deadline would allow essentially the same benefits by spreading the cost to manufacturers and consumers over a longer period.

Of course, any effort to broaden the conducted emission limits is likely to raise the costs of manufacturing residential microwave ovens and other devices that are not subject to the Commission's existing conducted emission rules. AHAM's members, though, do not oppose the Commission's efforts to harmonize its conducted emission limits with the standards developed

^{5/} See Association of Home Appliance Manufacturers, "1997 Major Appliance Industry Fact Book" (October 1997) at 23 ("AHAM Fact Book") ("Major appliance prices have increased less than those of most other goods and services due to an intensely competitive industry, higher production efficiencies, and the traditional consumer resistance to higher purchase costs.")

^{6/} Approximately 5 percent of all U.S. household have 2 or more microwaves. Preliminary data indicates that in 1999 alone, more than 11 million microwave ovens were sold.

^{7/} See AHAM Fact Book at 23 (citing Merchandising Magazine Annual Statistical Report for 1980 and Dealerscope Merchandising Annual Statistical Report for 1994). The average worker would have had to work for 61.9 hours to earn the wages necessary to buy a microwave oven in 1980; the figure had dropped to 19.8 hours by 1994, a 68 percent decrease. See *id.* (citing Bureau of Labor Statistics data for average hourly wages).

by the CISPR. Nor do AHAM's members oppose the Commission's efforts to protect and promote wireless services that rely on the use of frequencies below 30 MHz, such as AM broadcasts and land mobile radio applications, as long as those efforts do not depart from the Commission's longstanding policy of preserving the priority for licensed ISM equipment, including microwave ovens, to operate in the 2.4 GHz band. AHAM asks only that the Commission establish a transition period that will permit manufacturers to adapt their microwave ovens in a manner that minimizes the costs and disruptions associated with harmonization. Microwave oven manufacturers need time to undertake the significant engineering, development, testing, procurement, and regulatory approval work necessary to incorporate RF filters.

II. A SINGLE, UNIFORM THREE-YEAR DEADLINE WOULD BEST SERVE THE PUBLIC INTEREST IN ACHIEVING HARMONIZATION AT MINIMUM COST

A. A One-Year Timeframe for New Model Compliance Would Curb Innovation

Adoption of a shorter time frame for compliance by new models of appliances would create a perverse incentive to keep old models on the market. If new microwave ovens must meet the CISPR limits but existing versions are governed by existing rules, then manufacturers are more likely to keep their current models on the market in order to avoid the costs associated with installing RF filters in newer ovens. Innovation would be discouraged and consumers may be denied the benefit of advances in product design, such as increased energy efficiency or new features, during the three-year transition period for existing ovens. For this reason alone, the Commission should avoid attempting to subject new models of appliances to the CISPR standards two years early.

B. A Uniform Deadline Is Essential to Achieve the Goals of the NPRM

A timetable that imposes the CISPR standards on new microwave ovens before requiring changes to currently available versions would do little to reduce interference problems in the

period before all ovens must comply with the new rules. Even if manufacturers introduce new models despite the added costs of incorporating RF filters, many existing, non-compliant ovens will continue to be sold during the three-year transition period. Consequently, ongoing interference with low-frequency wireless services is inevitable. Although the number of ovens that may cause interference problems will be reduced, any new low-frequency service or device will have to be designed to account for potential interference for an indefinite period. There is no justification for imposing the added cost burden generated by a one-year transition to the CISPR standards for new models when the shorter compliance period is not likely to make any meaningful difference in the availability or utility of services using frequencies below 30 MHz.

III. THE PRIOR IMPLEMENTATION OF CISPR STANDARDS ELSEWHERE DOES NOT WARRANT THE IMPOSITION OF AN AGGRESSIVE COMPLIANCE DEADLINE FOR NEW MODELS OF RESIDENTIAL MICROWAVE OVENS IN THE UNITED STATES

As the Commission acknowledges, Europe and Canada have already implemented the CISPR conducted emission standards proposed in the FCC's NPRM. AHAM does not agree, however, with the FCC's conclusion that prior implementation of the CISPR standards in other countries is sufficient grounds for adopting a one-year compliance deadline for new models of residential microwave ovens in the United States.^{8/}

The FCC's proposal to force manufacturers to incorporate the harmonized standard into new models of microwave ovens within a single year would cause an unreasonable burden on the microwave industry. The lead times required to procure the necessary testing equipment and services (six months), make arrangements with parts suppliers (six to nine months) and obtain approval of new equipment designs from Underwriters Laboratories and the Commission (two to three months) make a one-year deadline extremely difficult to meet. Moreover, the Commission

should keep in mind that development work has been completed on many upcoming models and design changes have been “frozen” before manufacturing begins. Timely evaluation and incorporation of RF filters into these ovens would be extremely disruptive and inefficient.

Although AHAM’s members have adapted some of their manufacturing operations and facilities to comply with the lower conducted emission now required in Europe and Canada, a portion of these facilities and operations have not yet been engineered because they serve only U.S. markets and other markets where CISPR standards are not yet in place. Many factories manufacture ovens for both U.S. and foreign markets, but they have separate lines or parts of lines for products destined for the U.S. market. Factories use separate or “split” lines because U.S. appliances must operate at different voltage levels than European models and because stricter ground current leakage specifications imposed by Underwriters Laboratories make RF filters used for European microwave ovens unsuitable for the U.S. market. Thus, manufacturers will have to install different RF filters on ovens sold in the United States even after the conducted emissions standards become uniform.

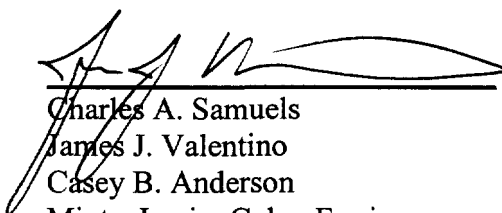
Accordingly, AHAM members, especially those that sell primarily to the U.S. market, will be forced to absorb the added costs of incorporating RF filters by retooling production lines almost immediately. Prior implementation of lower conducted emission standards in other countries will have little, if any, impact on the costs and other resources necessary to modify the design of new oven models sold in the United States marketplace.

^{8/} See NPRM at ¶ 34 (“the standards being proposed are the same as those used in most other countries”).

CONCLUSION

For the reasons outlined above, AHAM respectfully requests that the Commission adopt a uniform three-year deadline for compliance with its proposed reductions in conducted emissions limits for household appliances, including microwave ovens.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Charles A. Samuels", is written over a horizontal line.

Charles A. Samuels

James J. Valentino

Casey B. Anderson

Mintz, Levin, Cohn, Ferris,

Glovsky and Popeo, P.C.

701 Pennsylvania Avenue, N.W.

Suite 900

Washington, DC 20004

(202) 434-7300

Counsel to AHAM

January 31, 2000

CERTIFICATE OF SERVICE

I, Jette Ward, hereby certify that on the 31st day of January, 2000, I caused copies of the foregoing "COMMENTS OF THE ASSOCIATION OF HOME APPLIANCE MANUFACTURERS," to be served by hand delivery on the following:

Magalie Roman Salas, Secretary (original + 4)
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Washington, D.C. 20554



Jette Ward